In the Claims

1. (Currently amended) A computerized method comprising:

determining belief probabilities for ontological concepts within a preference model representing a belief of user preferences, wherein the belief probabilities are based on user feedback;

performing a convolution of the belief probabilities and ontology co-occurrence probabilities; and

generating a prioritized list from a plurality of documents based on the convolution, wherein the prioritized list is used to filter data for output to the user.

2. (Original) The computerized method of claim 1, further comprising calculating the ontology co-occurrence probabilities for ontological concepts within a co-occurrence model, the ontology co-occurrence probabilities representing a probability of two ontological concepts being associated with a single document of the plurality of documents.

3. (Original) The computerized method of claim 2, wherein the preference model and the co-occurrence model include probabilistic graphical models.

4. (Original) The computerized method of claim 3, wherein the preference model and the co-occurrence model include Markov networks.

5. (Original) The computerized method of claim 3, wherein the preference model and the co-occurrence model include Bayesian networks.

6. (Original) The computerized method of claim 3, wherein the ontological concepts within the preference model and the co-occurrence model are represented by nodes within the models.

7. (Original) The computerized method of claim 2, wherein the ontological concepts within the preference model and the ontological concepts within the co-occurrence model are the same.

8. (Original) The computerized method of claim 1, further comprising associating keywords of the plurality of documents with the ontological concepts within the preference model.

9. (Original) The computerized method of claim 1, further comprising assigning an overall weighting value to each of the plurality of documents based on the convolution.

10. (Original) The computerized method of claim 1, wherein generating the prioritized list comprises prioritizing the plurality of documents by an overall weighted value.

11. (Original) The computerized method of claim 1, further comprising recording content associated with a document from the prioritized list.

12. (Original) The computerized method of claim 1, further comprising presenting the prioritized list through a graphical user interface.

13. (Original) The computerized method of claim 1, further comprising selecting a document from the prioritized list.

14. (Original) The computerized method of claim 1, further comprising receiving the user feedback, wherein the feedback is selected from the group consisting of explicit feedback and implicit feedback.

15. (Original) The computerized method of claim 14, wherein the feedback is received through a personal video recorder.

16. (Original) The computerized method of claim 1, wherein the convolution is a noisy-OR convolution.

17. (Original) The computerized method of claim 1, wherein generating the prioritized list comprises extracting the *k* nearest neighbors for each ontological concept based on the convolution to determine an overall weighted value, where *k* is a predefined value.

18. (Original) The computerized method of claim 1, wherein the documents are television program description documents.

19. (Original) The computerized method of claim 1, wherein the documents describe multimedia content.

20. (Currently amended) An apparatus comprising:

means for determining belief probabilities for ontological concepts within a preference model representing a belief of user preferences, wherein the belief probabilities are based on user feedback;

means for performing a convolution of the belief probabilities and ontology co-occurrence probabilities; and

means for generating a prioritized list from a plurality of documents based on the convolution, wherein the prioritized list is used to filter data for output to the user.

21. (Original) The apparatus of claim 20, further comprising means for calculating the ontology co-occurrence probabilities for ontological concepts within a co-occurrence model, the ontology co-occurrence probabilities representing a probability of two ontological concepts being associated with a single document of the plurality of documents.

22. (Original) The apparatus of claim 21, wherein the ontological concepts within the preference model and the ontological concepts within the co-occurrence model are the same.

23. (Original) The apparatus of claim 21, wherein the preference model and the co-occurrence model include probabilistic graphical models.

24. (Original) The apparatus of claim 22, wherein the ontological concepts within the preference model and the co-occurrence model are represented by nodes within the models.

25. (Original) The apparatus of claim 20, further comprising means for associating keywords of the plurality of documents with the ontological concepts within the preference model.

26. (Original) The apparatus of claim 20, further comprising means for assigning an overall weighting value to each of the plurality of documents based on the convolution.

27. (Original) The apparatus of claim 20, wherein the means for generating the prioritized list comprises means for prioritizing the plurality of documents by an overall weighted value.

28. (Original) The apparatus of claim 20, further comprising means for recording content associated with a document from the prioritized list.

29. (Original) The apparatus of claim 20, further comprising means for selecting a document from the prioritized list.

30. (Original) The apparatus of claim 20, further comprising means for receiving the user feedback, wherein the feedback is selected from the group consisting of explicit feedback and implicit feedback.

31. (Original) The apparatus of claim 20, wherein the convolution is a noisy-OR convolution.

32. (Original) The apparatus of claim 20, wherein the means for generating the prioritized list comprises means for extracting the *k* nearest neighbors for each ontological concept based on the convolution to determine an overall weighted value, where *k* is a predefined value.

33. (Currently amended) A machine-readable medium having executable instructions to cause a machine to perform a method comprising:

determining belief probabilities for ontological concepts within a preference model representing a belief of user preferences, wherein the belief probabilities are based on user feedback;

performing a convolution of the belief probabilities and ontology co-occurrence probabilities; and

generating a prioritized list from a plurality of documents based on the convolution, wherein the prioritized list is used to filter data for output to the user.

34. (Original) The machine-readable medium of claim 33, wherein the method further comprises calculating the ontology co-occurrence probabilities for ontological concepts within a co-occurrence model, the ontology co-occurrence probabilities representing a probability of two ontological concepts being associated with a single document of the plurality of documents.

35. (Original) The machine-readable medium of claim 34, wherein the ontological concepts within the preference model and the ontological concepts within the co-occurrence model are the same.

36. (Original) The machine-readable medium of claim 34, wherein the preference model and the co-occurrence model include probabilistic graphical models.

37. (Original) The machine-readable medium of claim 36, wherein the preference model and the co-occurrence model include Markov networks.

38. (Original) The machine-readable medium of claim 36, wherein the preference model and the co-occurrence model include Bayesian networks.

39. (Original) The machine-readable medium of claim 36, wherein the ontological concepts within the preference model and the co-occurrence model are represented by nodes within the models.

40. (Original) The machine-readable medium of claim 33, wherein the method further comprises associating keywords of the plurality of documents with the ontological concepts within the preference model.

41. (Original) The machine-readable medium of claim 33, wherein the method further comprises assigning an overall weighting value to each of the plurality of documents based on the convolution.

42. (Original) The machine-readable medium of claim 33, wherein the method further comprises generating the prioritized list comprises prioritizing the plurality of documents by an overall weighted value.

43. (Original) The machine-readable medium of claim 33, wherein the method further comprises recording content associated with a document from the prioritized list.

44. (Original) The machine-readable medium of claim 33, wherein the method further comprises selecting a document from the prioritized list.

45. (Original) The machine-readable medium of claim 33, wherein the method further comprises receiving the user feedback, wherein the feedback is selected from the group consisting of explicit feedback and implicit feedback.

46. (Original) The machine-readable medium of claim 45, wherein the feedback is received through a personal video recorder.

47. (Original) The machine-readable medium of claim 33, wherein the convolution is a noisy-OR convolution.

48. (Original) The machine-readable medium of claim 33, wherein generating the prioritized list further comprises extracting the *k* nearest neighbors for each ontological concept based on the convolution to determine an overall weighted value, where *k* is a predefined value.

49. (Original) The machine-readable medium of claim 33, wherein the documents are television program description documents.

50. (Original) The machine-readable medium of claim 33, wherein the documents describe multimedia content.

51. (Currently amended) A system comprising:

a processor coupled to a memory through a bus; and

a personalization process executed by the processor from the memory to cause the processor to determine belief probabilities for ontological concepts within a preference model representing a belief of user preferences, wherein the belief probabilities are based on user feedback, perform a convolution of the belief probabilities and ontology co-occurrence probabilities, and generate a prioritized list from a plurality of documents based on the convolution, wherein the prioritized list is used to filter data for output to the user.

52. (Original) The system of claim 51, wherein the personalization process further causes the processor to calculate the ontology co-occurrence probabilities for ontological concepts within a co-occurrence model, the ontology co-occurrence probabilities representing a probability of two ontological concepts being associated with a single document of the plurality of documents.

53. (Original) The system of claim 52, wherein the preference model and the co-occurrence model include probabilistic graphical models.

54. (Original) The system of claim 53, wherein the preference model and the co-occurrence model include Markov networks.

55. (Original) The system of claim 53, wherein the preference model and the co-occurrence model include Bayesian networks.

56. (Original) The system of claim 53, wherein the ontological concepts within the preference model and the co-occurrence model are represented by nodes within the models.

57. (Original) The system of claim 52, wherein the ontological concepts within the preference model and the ontological concepts within the co-occurrence model are the same.

58. (Original) The system of claim 51, wherein the personalization process further causes the processor to associate keywords of the plurality of documents with the ontological concepts within the preference model.

59. (Original) The system of claim 51, wherein the personalization process further causes the processor to assign an overall weighting value to each of the plurality of documents based on the convolution.

60. (Original) The system of claim 51, wherein generating the prioritized list comprises prioritizing the plurality of documents by an overall weighted value.

61. (Original) The system of claim 51, wherein the personalization process further causes the processor to record content associated with a document from the prioritized list.

62. (Original) The system of claim 51, wherein the personalization process further causes the processor to present the prioritized list through a graphical user interface.

63. (Original) The system of claim 51, wherein the personalization process further causes the processor to select a document from the prioritized list.

64. (Original) The system of claim 51, further comprising an input-output device coupled to the processor through the bus, wherein the personalization process further causes the input-output device to receive the user feedback, wherein the feedback is selected from the group consisting of explicit feedback and implicit feedback.

65. (Original) The system of claim 64, wherein the feedback is received through a personal video recorder.

66. (Original) The system of claim 51, wherein the convolution is a noisy-OR convolution.

67. (Original) The system of claim 51, wherein generating the prioritized list comprises extracting the k nearest neighbors for each ontological concept based on the convolution to determine an overall weighted value, where k is a predefined value.

68. (Original) The system of claim 51, wherein the documents are television program description documents.

69. (Original) The system of claim 51, wherein the documents describe multimedia content.